

Cell and Cell Organelles

Chapter 10: Cell and Cell Organelles · Topic 1

Key Concept

The nucleus controls cell activities and contains genetic material (DNA), acting as the cell's control centre.

Mitochondria are the 'powerhouses' of the cell, producing energy (ATP) through cellular respiration for the cell's activities.

The cell membrane controls what enters and exits the cell, maintaining a boundary between the cell and its environment.

Plant cells have additional structures like a cell wall (for support) and chloroplasts (for photosynthesis), not found in animal cells.

Quick Revision Notes

- Nucleus: controls activities, has DNA.
- Cell's control centre.
- Mitochondria: cell's powerhouse.
- Produces energy (ATP) via respiration.
- Cell membrane: controls entry/exit.
- Maintains cell-environment boundary.
- Plant cells: cell wall, chloroplasts.
- Not found in animal cells.

Practice Questions

- 1 Draw a plant cell and label its organelles.
- 2 Draw an animal cell and label its organelles.
- 3 Discuss the nucleus's role.
- 4 Discuss why mitochondria are called powerhouses.
- 5 Compare plant and animal cells.
- 6 Explain cell organelles in your own words.